

UNITES STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

UNITED STATES OF AMERICA,

Plaintiff,

-against-

NICHOLAS PALUMBO, NATASHA PALUMBO,
ECOMMERCE NATIONAL, LLC d/b/a/
Tollfreedeals.com and SIP RETAIL d/b/a sipretail.com,

Defendants.

Case No.: 1:20-cv-00473-EK-RLM

DECLARATION OF DEAN HANSEN

DEAN HANSEN, under penalty of perjury, declares as follows:

1. I am a citizen of Canada and am the President / Primary Data Analyst of DTH Software, Inc, a software development and data analytics company with clients in the United States and Canada.
2. I have been in the Telecom industry since 2007 specializing in design and build of billing systems and custom data-mining solutions.
3. I have 4 years' experience with SIPNavigator, the software platform used by defendants.
4. Defendants' counsel at Offit Kurman, P.A. have engaged me as a consultant for three purposes— (i) to outline the VOIP industry and technology, (ii) to comment on the allegations made in the application for a preliminary injunction in the light of my own firsthand experience with commercial VoIP networks, and (iii) comment on my knowledge of Nicholas and Natasha Palumbo.

A. Qualifications

5. Work history:

i. 2007 to present – DTH Software, Inc.

6. Education history:

i. 1994 to 1998 – University of New Brunswick - School of Engineering.

7. A copy of my curriculum vitae is annexed hereto as Exhibit 1

B. Summary of Materials Reviewed

8. As a factual basis for my opinion, I have reviewed the following pleadings, court papers and discovery materials from the present litigation:

a. The Complaint with the Ralston and Bracken declarations (“Complaint”, docket no. 1)

C. Outline of the VOIP Industry

9. VOIP carriers, known as “intermediary carriers” or “wholesale carriers” do not themselves place calls – they connect other people’s calls over the Internet. There are thousands of intermediary carriers that operate in the U.S. alone and even more overseas.

10. Calls are routinely routed through multiple carriers before they reach their destination; a single call may go through more than a dozen carriers before it is connected. It is extremely rare for an originator – the person who makes the call – to be connected to the recipient – the person who receives the call – by only one carrier. This multi-tiered web of linked intermediary carriers is normal and ensures competition for low connection fees.

11. The system works as follows: intermediary carrier A is paid money from intermediary carrier B to connect a call coming from carrier B through carrier A’s system. Here, carrier B is carrier A’s “client,” carrier A is carrier B’s vendor. If the call travels the other way – i.e. if carrier A wants to route a call through carrier B’s system – then the terms are reversed and the money flows in the other direction. It is normal for carriers to be both vendors to and clients

to each other. A carrier is a “gateway carrier” when it connects the VOIP network with the traditional telephone network.

12. There are numerous legitimate uses of robocalls. Many companies use robocalls to give reminders to their customers. For example, pharmacies use robocalls to alert clients when their medication is ready for pickup; doctors’ offices use robocalls to remind patients when their appointments are; law offices use robocalls to reach out to potential class members in class-action lawsuits; the government uses them to distribute school closing announcements; utility companies notify customers of service interruptions. This is especially useful with older consumers who are not well-versed with text messaging and email.

13. Similarly, call centers located abroad place calls into the U.S. Call centers have many legitimate uses in the modern industry. For example, a call center may engage in direct sales, which is a legal use of the telephone network. In addition, many companies when offering technological or services support have opted to use call centers abroad. While previously a consumer would have to call the customer support line and wait for a representative to become available, frequently companies (including Amazon) will let the customer “book” a call online and call the customer once a representative becomes available to avoid wasting the customer’s time on the phone. In addition, political and other polling enterprises use call centers to ask individuals who they would vote for. Political polls are labor intensive, and it is unsurprising that the political rating companies have long ago outsourced their call centers to locations outside the U.S.

14. Frequently, robocalls and call center traffic is mixed. A call may start with a prerecorded offer or reminder followed by the words “to be connected with an operator, press 1.”

15. All of these calls, both robocalls and call centers, often result in very short calls. This may be because the reminder about one's prescriptions only takes a few seconds; or it may be because recipients do not want to talk to a direct sales caller or give their opinion on politics.

16. Nearly all intermediary carriers have the ability to provide toll-free numbers to their clients upon request. This is legal and normal in the VOIP industry.

17. Naturally, all of these – robocalls, call center traffic and mixed robocalls/call centers – can be exploited by bad actors. Robocalls can be used to defraud and deceive. Unfortunately, an intermediary carrier cannot distinguish between fraudulent and legitimate calls as they pass through their system.

18. Due to this structure, intermediary carriers do not have contact with the original callers or the eventual recipients of calls. Usually a call originates many clients prior and is picked up many vendors later. The carriers do not know the content of the calls.

19. The system that defendants employ – SIPNavigator – only reads the signal-level information, i.e. the meta-data of a call. This includes the call number (real or spoofed), the duration, the carrier it arrives from, etc. That system – like most systems in the industry – does not include the actual transmission of the data packets of the call, i.e. the spoken words on the call. Put differently, even if carriers wanted to, they could not listen to individual calls. Any carrier that had the ability to listen to calls and did so would violate numerous privacy laws. In short, there is no way for a carrier to know what's in a call.

20. To stop fraudulent calls, carriers must rely on the complaints system. Once an intermediary carrier receives a complaint, it can and must review the phone number associated with the complaint. It must then alert the client from which it received that call on that line; it will usually also block that number. The alert to the client operates as a follow-up

complaint; the client will do the same thing on its network. This way the complaint and the problematic call can be traced to its source, where the fraudulent originator can be blocked.

21. It would make no sense to block all calls from a client upon receipt of a complaint relating to one number from that client. There is no guideline, regulation, best practice, handbook, or industry standard that requires that an intermediary carrier must shut down an entire client when it receives a complaint about some of its numbers.

D. Comments on the Allegations Made by the Government

9. **Spoofing.** Defendants are not able to directly spoof calls in any way. The SIPNavigator platform operates in strictly a pass-through mode. This means that the platform will pass through the ANI¹ as it is received by the sending party. It has no ability/functionality to alter the ANI.

10. In addition, there is no functionality within SIPNavigator that would allow alteration of the CallerID or ANI therefore Defendants would not be able to conspire in any scheme that involved spoofing. SIPNavigator simply passes through the CallerID/ANI sent by the sending party. It would be impossible for defendants or any SIPNavigator user to detect whether a call is spoofed or not. The upcoming implementation of the STIR/SHAKEN protocol by the FCC is intended to mitigate spoofed ANIs but it is not in production as yet.

11. **Extremely short calls.** A zero-second-duration call is not a call at all. It is an attempt to make a call, but the attempt did not complete and therefore was never an actual call, only an attempt. Billing (in either direction) is not applied to attempts that do not complete. Any attempt that did complete, therefore becoming an actual call, has a minimum duration of 1

¹ Automatic number identification (ANI) is a feature of a telecommunications network for automatically determining the origination telephone number on toll calls. ANI is commonly known as the CallerID.

second. A statement like "N% of calls under 1 second..." is inherently a flawed statement since all calls are at least 1 second in duration.

12. **Call completion ratio.** This is affected by dozens of factors but they are network related. The two primary factors for completion are 1) Previous attempts for the call attempt by other providers 2) Availability and quality of downstream carriers.

- a. For example, if an originator is using multiple intermediary carriers to complete an attempt and the Palumbos are part of a group of intermediary carriers used by the originator, as opposed to being the only carrier used by an originator then the likelihood of completing an attempt is dramatically lower. This is referred to as diluted traffic and is very common across the VoIP industry as a whole. The originator uses multiple carriers and a Least Cost Router ("LCR") to reduce their costs however it results in lower overall call completion ratio for the individual carriers used by the originator.
- b. As another example, consider the availability and quality of downstream carriers: If the capacity of Defendants to connect downstream toward a call recipient is of poor quality or the downstream vendors are full (lacking in network capacity), a call is much less likely to complete.

13. Call completions ratios are primarily influenced by how many carriers have already tried to complete an attempt prior to Defendants as well as the quality and quantity of Defendants' downstream vendors. Intent, malicious or otherwise, cannot be derived from call completion ratio. It is simply a measure of network efficiency.

14. **Low average call duration.** Most short calls, which lead to short average duration, are caused by a feature known as "Automatic Voicemail Detection" used by the originating party. Voicemail Detection will automatically close a call (i.e. hang up) if the technology determines that the receiving party was answered by voice mail as opposed to a human. These calls are normally closed around the 3-second mark. The use of voicemail detection indicates the originator did not feel it was viable/beneficial to leave a voicemail. This results in a low average call duration. This technology is used by legitimate users of the marketplace and bad actors alike. It cannot be used to infer anything about the call. By the same token, a person with malicious intent may choose to leave long voicemails and that would result in a long average call duration. Therefore, low average call duration is not an indicator of fraud or malicious intent. It is an indicator of a financial decision made by the originating party.

15. **Impossible to monitor ongoing calls.** SIPNavigator does not provide any feature/functionality allowing its users to listen to or monitor the audio of any call.

16. **High volume of calls.** The presence of a high volume of calls is not an indicator of fraud. It simply indicates that the type of customers that the operator serves are high-volume businesses like notification services or call centers. These are legitimate uses of the phone system. For example, call centers place direct sales and conduct surveys, robocalls are used to inform the public about school closures and utilities use them to inform customers about service interruptions.

17. **Volume is not an indicator of fraud.** Volume simply indicates a high volume of customers or customers whose businesses consume high-volume services like notifications. If volume was an indicator of fraud then the incumbents (AT&T, Verizon, etc.) would have been dismantled for fraud long ago.

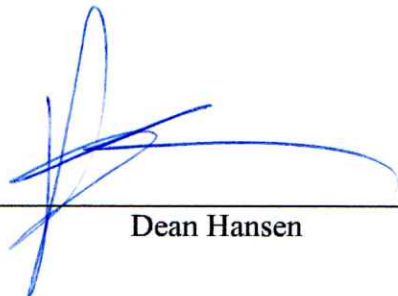
18. **The variety of unique numbers transmitted.** In the industry, there is a measure called “ANI Cardinality Ratio,” a measure of ANI uniqueness. This is not available in SIPNavigator or any other commercially available switch platform that I am aware of. It is only available in advanced metric systems or in custom, high-volume data mining.

19. A large volume of unique CallerIDs indicates the originator is dialing a high volume of attempts but again, that does not indicate or allow a person to derive/assume intent or fraud.

E. The Palumbos

20. I have known the Palumbos for 3 years. They have always been honest, forthright and kind in their dealings with me and others. I have known them personally and professionally. They are both law-abiding citizens and would never try to defraud anyone.

Dated: Ottawa, Canada
February 25, 2020



Dean Hansen

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